

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 December 2001 (27.12.2001)

PCT

(10) International Publication Number
WO 01/99009 A2

(51) International Patent Classification⁷: **G06F 17/60**

(21) International Application Number: **PCT/US01/19698**

(22) International Filing Date: **20 June 2001 (20.06.2001)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
60/212,670 **20 June 2000 (20.06.2000)** **US**

(71) Applicant (*for all designated States except US*): **UNITED STATES POSTAL SERVICE [US/US]; 475 L'Enfant Plaza, SW, Rm 6344, Washington, DC 20260-1135 (US).**

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **KRAUSE, Robert, G. [US/US]; 219 Wiltshire Lane, Severna, MD 21146 (US). ORBKE, Wayne, H. [US/US]; 2685 Hackscross Road, Germantown, TN 38138 (US).**

(74) Agents: **GARRETT, Arthur, S. et al.; Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).**

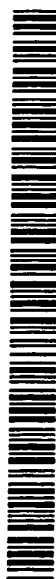
(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with declaration under Article 17(2)(a); without abstract; title not checked by the International Searching Authority*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 01/99009 A2

(54) Title: **SYSTEMS AND METHODS FOR ELECTRONIC MESSAGE CONTENT IDENTIFICATION**

(57) Abstract:

SYSTEMS AND METHODS FOR ELECTRONIC MESSAGE CONTENT IDENTIFICATION

RELATED APPLICATION

[001] Under provisions of 35 U.S.C. § 119(e), the Applicant claims the benefit of U.S. provisional application serial no. 60/212,670, filed June 20, 2000, which is hereby expressly incorporated herein by reference.

TECHNICAL FIELD

[002] The present invention relates to electronic message transmission. More particularly, the present invention, in various specific embodiments, involves methods and systems directed to identifying electronic messages based on a message content identifier or participant code.

BACKGROUND

[003] The United States Postal Service (USPS) is an independent government agency that provides mail delivery and other services to the public. The USPS is widely recognized as a safe and reliable means for sending and receiving physical mail and other items. The USPS also provides electronic mail service. With the advent and steady growth of electronic mail (e-mail) and electronic commerce, e-mail recipients may be constantly bombarded with increasing numbers of electronic messages.

[004] Once an e-mail recipient's address is disclosed, it is possible for the recipient to receive large number of unwanted electronic messages, such as solicitations for all types of e-commerce products. The e-mail recipient's e-mail address may be disclosed by an Internet service provider or by any third party to which the e-mail recipient has sent an electronic message.

to decide whether to delete or save the electronic messages once they are received. This tedious process leads to cluttered electronic mailboxes and a resulting loss of time for the e-mail recipient, as the recipient attempts to manage the e-mails within the electronic mailbox. Other existing methods are similarly undesirable.

[006] Thus, there remains a need for efficiently identifying e-mail messages before they are delivered to an e-mail recipient's electronic mailbox, thereby eliminating the clutter of unwanted e-mail messages and the lost of time managing the e-mail messages within the electronic mailbox.

SUMMARY OF THE INVENTION

[007] Consistent with the present invention, an electronic message identification method and system is provided that avoids the problems associated with current systems and methods for identifying and managing electronic messages.

[008] In one aspect, a method consistent with the present invention for sending an electronic file to a customer comprises receiving an approval from the customer indicating acceptable content for electronic files that are sent to the customer; receiving the electronic file from a sender, the electronic file including file content and a message content identifier corresponding to the file content; comparing the message content identifier to the approval from the customer; and delivering the file content to an electronic mailbox of the customer, if the message content identifier is consistent with the approval from the customer indicating acceptable content.

[009] Both the foregoing general description and the following detailed description are exemplary and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[010] The accompanying drawings provide a further understanding of the invention and, together with the detailed description, explain the principles of the invention. In the drawings:

[011] FIG. 1 is a layout of a system for providing electronic message identification consistent with the present invention;

[012] FIG. 2 is a layout of an alternative embodiment for providing electronic message identification consistent with the present invention;

[013] FIG. 3 is a block diagram of the internal processes of an e-address processor consistent with the present invention; and

[014] FIG. 4 is a block diagram illustrating the MCIS participant sender or mailer process to encode the electronic message content consistent with present invention.

[015] FIG. 5 is a block diagram illustrating the process for filtering and delivering the electronic message to an appropriate folder consistent with the present invention.

[016] FIG. 6 is a flow chart illustrating a method for applying the participant code, identifying the electronic message content, and delivering the electronic messages consistent with the present invention.

DETAILED DESCRIPTION

[017] Reference will now be made to various embodiments according to this invention, examples of which are shown in the accompanying drawings and will be obvious from the description of the invention. In the drawings, the same reference numbers represent the same or similar elements in the different drawings whenever possible.

System Operation

[018] Figure 1 is an exemplary embodiment of a message content identifier system (MCIS system) 100 for a mail service. Figure 1 illustrates a

system layout where a mailer sends electronic messages directly to an e-mail system, in which system filtering takes place as a front end function of the e-mail system.

[019] In Figure 1, an MCIS participating sender or mailer (MPSM) 101 enters MCIS system 100 by registering with MCIS system 100. During the registration process, MPSM 101 is assigned a participant code or standardized content identifier for identification within MCIS system 100. The MCIS participant code, in addition to specifically identifying the industry segment of MPSM 101 and their company, identifies multiple permutations of product type codes or offering codes that are associated with the specific company, so that electronic messages sent by MPSM 101 to MCIS system 100 can be accordingly identified. Once the registration process is complete, these product codes are provided to MPSM 101, with the product type permutations, via some electronic communication, such as an e-mail. The registration process and the MCIS participant code structure and coding process will be described in greater detail below.

[020] Before transmitting the electronic message, MPSM 101 embeds the MCIS participant code into the electronic messages that are generated and transmits the electronic messages through network 102 to MCIS Mailer Interface 104. Network 102 may be the internet or any type of analog or digital communications network. MCIS Mailer Interface 104 communicates with a core application 120 of MCIS system 100. Core application 120 interfaces e-mail system 114 and ICRS system 112 and allows the setup of MPSM 101 on e-mail system 114, using master content ID database 122. Master content ID database 122 contains the codes that core application 120 interrogates and stores for allocating the participant code to each MPSM 101, during the registration process.

[021] To access the e-mail message transmitted by MPSM 101, a customer 106 must register with an e-mail system 114 of MCIS system 100. Using laptop 108, customer 106, through network 110, logs into an Internet customer registration system (ICRS system) 112. Network 110 may be the

internet or any type of digital or analog communications network. With ICRS system 112, customer 106 registers and sets up the e-mail account by making selections for message filtering options. For additional information on ICRS system 112, please refer to U.S. application serial no. 09/809,328 filed on March 16, 2001.

[022] In this embodiment of the present invention, the filtering selection could occur when a customer registers or it could be an adjunct feature once the actual mailbox is established. When implemented as an adjunct feature, the filters may be set up within the mailbox itself rather than during the process of obtaining the mailbox.

[023] Once MPSM 101 is registered as a participating mailer and customer 106 has signed up with MCIS system 100, then when MPSM 101 sends e-mail directly to the front end of e-mail system 114 via network 102 and MCIS filter 116, MCIS filter 116 checks the MCIS participant code against the preferences that the specific customer has indicated and executes appropriate routing.

[024] At this point, MCIS filter 116 may either route the electronic message and deliver it to the customer's mailbox within e-mail system 114 or reject the electronic message and notify MPSM 101 that the message has been rejected. As a third option, MCIS filter 116 may deliver the electronic message into a generic pool instead of an identified specific MCIS filtered mail folder within the customer's mailbox. Customer 106 would then know that this electronic message did not meet the filtering criteria to be delivered to the mailbox, but it was sorted as it entered the box and was rejected. In any event, feedback is provided to MPMS 101 as notification of the outcome of the attempt, either successful or unsuccessful. Customer 106 then may enter his e-mail box 118 within e-mail system 114, using laptop 108 and network 110, and view the MCIS filtered electronic messages, non-filtered electronic messages, or another functional segments of the E-mail box 118.

[025] Figure 1 as previously described, focuses on the system layout and flow where the mailer is sending electronic messages directly or

attempting to send electronic messages directly to customer 106. Figure 2 is an alternative embodiment where MPMS 101 may submit electronic files containing physical addresses, and possibly electronic addresses, and message content that contains MCIS participant coding. The service provided by this alternative embodiment may be implemented as a separate intermediate service.

[026] In this alternative embodiment, a physical address mailing list file 202 is uploaded, using a program, from MPMS 101 to an e-address processor 206. E-address processor 206 will be described in greater detail below. E-address processor 206 queries an ICRS customer database 208. As a result, ICRS customer database 208 outputs the customer's e-address and filtering preferences. ICRS customer database 208 contains the data supplied when customer 106 registered and set up the virtual e-addressing account with the mail service and initially recorded the filtering preferences.

[027] The query executed by E-address processor 206 may be implemented by several different means. For example, the query may be based on the physical address, codes that are associated with the physical address, the customer's name, or account numbers associated with the customer. The query uses one or more of the above mentioned components to translate the physical address mailing list file 202 to an electronic address.

[028] Furthermore, in this alternative embodiment, message content with MCIS coding 204 is also uploaded, using a program, to e-addressing processor 206, where the e-addressing information, message content and the MCIS coding are combined and the electronic message is created. The electronic message with the embedded coding is then sent to the MCIS filter 116 of Figure 2, where the customer preferences are identified. The electronic message is subsequently sent into an e-mail message routing system 210 for delivery into electronic mailbox repository 212. Then, return statistics are sent to MPMS 101 via an e-address status reporting module 214.

[029] Before describing, in Figure 3, the internal details of e-addressing processor 206, it is important to emphasize that the filtering executed by MCIS filter 116 may be implemented as part of the ICRS database query. Because the customer preferences may be stored on ICRS customer database 208, the filtering may take place as part of the querying process. The filtering process may also be implemented within e-address processor 206. The filtering process may be implemented in either fashion, that is, as part of the query of ICRS customer database 208, or by referencing back to the mail merge processor within e-address processor 206. The mail merge processor provides the function of creating the electronic message and will be discussed in the description of the internals of e-addressing processor 206.

[030] In the case where the message filtering is performed during the querying of ICRS customer database 208, the e-mail message does not have to run through the entire system before the filtering may take place. Processing may occur at the ICRS customer database 208 to identify those customers that in fact will accept the message content. Using this approach, message routing/handling decisions may be made upstream versus downstream in the process, and the message may be delivered directly to the e-mail message routing system 210 for delivery into electronic mailbox repository 212.

[031] Figure 3 is a block diagram of the internal processes within the e-addressing processor 206. The numbers used in Figure 3 correspond to the numbering system that is used in Figure 2. Figure 3 illustrates that physical address mailing list file 202 may be uploaded to an address matching system 302. In address matching system 302, the physical addresses are parsed and match codes are constructed for interrogating a match directory, within the address matching system, to obtain a match directory address associated with the input physical address. If a match is obtained, then the zip plus 4 code and all the other associated information contained within the address matching system for the associated physical address is fed into a key

generation and e-addressing query function 304, which in turn feeds a query to ICRS customer database 208.

[032] As a result of the database query, an output is provide from the ICRS customer database 208 to e-addressing processor 206. The output is an electronic address mailing list file 306, which is fed into a mail merge processor 308. Mail merge processor 308 receives message content with MCIS coding 204 and creates the electronic message. The resulting electronic message is then transferred to MCIS filter 116, where the customer preferences are identified. The electronic message is subsequently sent into e-mail message routing system 210 for delivery into electronic mailbox repository 212.

[033] The intelligence from within mail merge processor 308 may be returned to the ICRS customer database 208 and messages may be tagged with appropriate routing information for historical information tracking.

MCIS Participating Sender or Mailer (MPSM) Processing

[034] Figure 4 illustrates the process for applying the participant coding or standard content identifier to the message content. MPSM 101 inputs a message content 402 to a content coding program 404, where message content 402 is coded with a participant coding or standard content identifier 406. The participant code or standard content identifier may be inserted into the header section of an electronic message. Then, the electronic message is sent to E-mail system 114 via MCIS filter 116.

[035] Next, Figure 5 illustrates that the electronic message, including content 402, participant or standardized content identifier 406, and a recipient address 502, is received and submitted to filters 504. The recipient address 502 may be the customer's electronic mail box address. Filters 504, in turn, identify the customer's preferences, which were setup during the registration process, and apply the preferences to participant or standardized content identifier 406. Then, according to the identified preferences that are

consistent with the participant or standardized content identifier 406, the electronic messages are delivered to the appropriate folders. For example, bills are delivered to a folder 510, secure mail may be delivered to a folder 512, advertisements may be delivered to a folder 514, and e-mail may be delivered to a folder 516. For additional security, security features 506 and 508 are applied before bills and secured mail are delivered to their appropriate folders. The security features (506 and 508) may be a type of electronic security message, protocol, or handshake used to distinguish between authorized and unauthorized system users. For example, the security features (506 and 508) may be a fire wall.

Participant Code or Standard Content Identifier

[036] MCIS system 100 provides a standardized method for electronic messages and their content to be identified and subsequently filtered (accepted or rejected), based upon on the MCIS participant code or standardized content identifier 406. As described above, MCIS participating sender or mailer (MPSM) 101 is provided with content coding program 404 (Figure 4) to provide associated product type identifiers that may be incorporated into MCIS system 100.

[037] Once established as an MCIS system 100 participant, MPSM 101 provides this participant code or standardized content identifier 406 as part of all submitted messages for potential electronic delivery by the mail service or by other private commercial electronic message services licensed by the mail service to provide MCIS system messages to their customers.

[038] The participant code or standardized content identifier may be implemented with the following MCIS code format:

NNNNNNAAAAANNNNNNC

N=Numeric (0-9)

A=Alpha (A-Z)

C=Modulus 10 check digit

[039] The MCIS code format is 18 characters in length plus a check digit and is divided into three segments:

I. The first six characters (NNNNNN) identify the industry segment and is based upon the North America Industry Classification System (NAICS);

II. The next six characters of the code (AAAAAA) specifically identify a company within the industry segment and is based on the Address Change Service (ACS) participant code, which is describe in the publication of Appendix A (United States Postal Service, Address Change Service, Publication 8 (July 1998));

III. The last six characters (NNNNNN) are used to identify a specific product type or offering by a company;

IV. The last digit (C) is used to ensure the integrity or accuracy of the preceding 18 characters;

[040] For example, the MCIS participant code or standardized content identifier may be 721191BRXJKT5011521. The component parts are:

I. 721191 - the NAICS code that identifies the industry segment for Bed-and-Breakfast Inns;

II. BRXJKT - identifies a specific Bed-and-Breakfast Inn (e.g., XYZ Bed-and-Breakfast in Anytown, USA);

III. 501152 - identifies the contents of the messages as being an advertisement for discount offers for rooms booked 60 days in advance for stays during the month of July;

IV. 1 - identifies the check digit that ensures the integrity or accuracy of the preceding 18 characters.

Method of Operation

[041] Figure 6 is a flow diagram of a method 600 used by MPSM 101 to send electronic messages to a recipient's mailbox. To initiate the transfer of information, method 600 starts, the sender applies a standard coding to the message content to be delivered to the recipient, and the recipient specifies the type of content to be received and/or identifies the approved senders. (Stage 602- 606).

[042] Once the mail service receives the content with the standard coding from MPSM 101, the mail service reads the standard coding and compares the standard code to the recipient's preferences (Stage 608). The recipient's preferences specify the content that the recipient wishes to receive and/or identifies the approved senders. (Stage 610). If the standard code from MPSM 101 is inconsistent with the recipient's preferences, the mail service does not route the message content to the recipient's mailbox, and may notify MPSM 101 of non-delivery. (Stage 614). Then, the method ends. (Stage 620).

[043] If the standard code from MPSM 101 is consistent with the recipients specification, the mail service routes the content to the appropriate folder in the recipient's mailbox, and may notify the sender of the delivery. (Stage 616 and 618). Then, the method ends. (Stage 620).

[044] In view of the foregoing, it will be appreciated that the present invention provides a system and method directed to identifying electronic messages based on a message content identifier or participant code. Still, it should be understood that the foregoing relates only to the exemplary embodiments of the present invention, and that numerous changes may be made thereto without departing from the spirit and scope of the invention as defined by the following claims.

APPENDIX A

Address Change Service

This page intentionally left blank

Address Change Service

Introduction	3
Address Change Service: An Intelligent Solution	3
Meeting Mailers' Important Needs	
Major Benefits of ACS	
What Is Address Change Service?	4
ACS Change-of-Address Notifications	
Second-Generation ACS (Nixie Notifications)	
Features of Address Change Service	6
ACS Fulfillment File Media Options	
Telecommunications Option	
CFS ZIP Coverage File	
Fees	
Billing	
Participation Requirements	9
Participant Code	
Barcodes	
Endorsement	
Window Envelopes	
Or Current Resident	
Characters	
Text Size	
Keyline	
USPS Standard for Check Digit Computation	
ACS Notification Options: Mailpiece Endorsements	14
First-Class Mail Endorsement	
Address Service Requested	
Change Service Requested	
Periodicals Notification Options	
Nixies for All Periodicals Notification Options	
Standard Mail (A) Endorsement	
Address Service Requested	
Change Service Requested	
Standard Mail (B) Endorsement	
Address Service Requested	
Change Service Requested	
Shipper-Paid Forwarding (SPF) Option For Standard Mail	
ACS Fulfillment File	19
Fulfillment Record	
ACS Fulfillment File Header Record Fields	
ACS Fulfillment File Nixie Record Format	
ACS Fulfillment File COA Record Format	
Application Procedures	28
Address Change Service Application	

Address Change Service

Introduction

This document contains details of the Address Change Service (ACS), its technical information, and applications necessary for system participation. If any discrepancy exists between this document (Publication 8) and the *Domestic Mail Manual* (DMM), the DMM always takes precedence. Any regulation in this manual can be amended or rescinded by notices in the *Postal Bulletin*, *Federal Register*, or the DMM. If you need further information, refer to the DMM or call the National Customer Support Center, ACS Department, at 800-331-5746.

Address Change Service: An Intelligent Solution

Meeting Mailers' Important Needs

Mailers need an address change information system that offers speed, security, reliability, and savings. In response, the United States Postal Service (USPS) offers the Address Change Service (ACS) an intelligent solution for meeting those needs.

Right now, you may be finishing up those critical last-minute details to get your billings, parcels, or magazines to your clients or subscribers. Or perhaps you're working against a deadline to get an important direct mail campaign off and running. ACS can help you follow the customers on your address lists who move so that your mailings reach their destinations.

ACS is ideal if you maintain address records on computers. ACS requires no formal contract or service charge, but it does require that you develop your own matching software and configure your mailing address labels or address blocks to comply with the ACS format. You pay fees only for the actual address notifications that you receive.

ACS is designed to reduce substantially the number of address correction notifications provided manually to mailers and replace them with electronic notifications. However, ACS does not currently — and will not for the foreseeable future — eliminate manual address correction notifications completely. Therefore, ACS is not a guaranteed service; the USPS makes no assurance that any minimum percentage of a mailer's address correction notifications will be provided electronically rather than manually.

Address Change Service

Major Benefits of ACS

- Time and money are saved when electronic address corrections are compared with manual address corrections.
- Undeliverable-as-addressed (UAA) mail volume is reduced.
- Manual address corrections are reduced.
- Labor-intensive address change functions are reduced.
- Electronic address change information is available for specific mailings.
- Timely information is provided on a schedule you determine.
- Changes can be made electronically rather than manually.
- Address change information can be retrieved electronically by large-volume mailers via a telecommunications network.

What Is Address Change Service?

ACS Change-of-Address Notifications

Address Change Service (ACS) is an automated electronic enhancement to our traditional manual process for providing address corrections to mailers. It is not a replacement for the manual process; instead, it allows the opportunity for a reduction in the volume of manual address correction notifications provided. Therefore, ACS reduces both USPS and mailer costs for this activity.

The mail forwarding process begins when (1) a postal customer moves and files a Postal Service Form 3575, *Change of Address (COA) Order*, or (2) a customer's postal carrier discovers that the customer no longer receives mail at a particular address and no Form 3575 has been filed. In the latter instance, the carrier may file a Form 3575 on behalf of the customer, indicating that the customer moved and left no forwarding address. If this is a customer whose post office box is closed, a postal clerk may file a Form 3575 on behalf of the customer. The delivery unit sends the Form 3575 to the Computerized Forwarding System (CFS) unit, where it is entered into a database. The CFS unit then returns the Form 3575 to the delivery unit to be filed.

When a carrier receives a mailpiece and it is undeliverable-as-addressed at the old address due to customer relocation, the mailpiece (depending on its mail class and endorsements) is sent by the postal employee to the CFS unit responsible for forwarding mail destined to that old address. An attempt is then made to match the name and address to a COA on file at the CFS unit. If a match is attained from the CFS database and the mailpiece bears an active ACS participant code, the opportunity exists for an electronic notification to be generated. Otherwise, the COA notification is provided manually. Depending on its mail class and

Address Change Service

endorsements, the mailpiece is forwarded, discarded, or returned to sender.

Situations that will normally correctly result in the provision of hardcopy address corrections:

- Portion of nation not covered by the Computerized Forwarding System (CFS) network.
- Forwarding order not on file.
- Forwarding order expired. (This occurs after the 12-month forwarding period has ended.)
- Addressee is deceased.
- Single delivery points (e.g., colleges, universities, nursing homes, prisons, third-party mail receivers, etc.).
- After the 12-month forwarding period, Standard A and Standard B mailpieces that bear the endorsement *Address Service Requested* are returned manually with the reason for nondelivery.

More than 200 CFS units nationwide serve the majority of the United States and generate ACS fulfillment notifications. It should be noted, however, that some areas of the country and smaller post offices lie outside the geographic reach of the CFS network, and only manual address correction notifications are generated by the delivery units serving these areas.

Electronic ACS fulfillment notifications generated by the CFS units are transmitted daily to the National Customer Support Center (NCSC) in Memphis, Tennessee, where they are consolidated and provided to ACS-participating mailers.

Second-Generation ACS (Nixie Notifications)

The primary objective of ACS is to provide as much COA information as possible electronically. However, ACS may also capture and provide a portion of a mailer's nixie notifications electronically.

A *nixie* is a mailpiece that is undeliverable for reasons other than a customer move. ACS mailpieces that qualify as nixies and utilize the keyline provide an opportunity to be returned electronically along with the reason for nondelivery. Traditionally, this type of notification has been manually provided directly from the local delivery unit. When an ACS nixie is submitted by a postal delivery unit to a CFS site, an electronic notification can be returned to the mailer.

In addition to the ACS participant code, the mailer must use both the ACS keyline and an appropriate mailpiece endorsement to receive ACS nixie notifications.

Address Change Service

Note: Although optional for COA information, keylines are required if the mailer wants to receive electronic ACS notice notifications. Also, each keyline must end with a check digit correctly calculated using the USPS standard for check digit computation.

Features of Address Change Service

ACS Fulfillment File Media Options

Fulfillment files are provided in each of the media listed in Table 1 below. On the ACS application, customers must specify the medium they prefer.

Fulfillment files are provided to participating mailers daily, semiweekly, weekly, semimonthly, or monthly, depending on their needs and ACS volume. Due to increased processing costs, daily customers must meet the volume requirements outlined on page 7 and must begin receiving their files via telecommunications within 6 months after implementation.

Table 1. ACS Fulfillment File Media Options

Media Type	Character Set	Keyline Length	Record Length	Character Set	IBM Standard
9-track tape	1600 BPI	427	17080	EBCDIC	IBM Standard
9-track tape	1600 BPI	427	6405	EBCDIC	IBM Standard
9-track tape	6250 BPI	427	17080	EBCDIC	IBM Standard
9-track tape	6250 BPI	427	6405	EBCDIC	IBM Standard
3480 Cartridge	38K	427	17080	EBCDIC	IBM Standard
5 1/4 Diskette	DSHD	427	N/A	ASCII	N/A
3 1/2 Diskette	DSHD	427	N/A	ASCII	N/A

Accompanying the fulfillment file is a shipping notice that lists the number of notifications provided (notifications are listed by participant code). Because tapes must be returned to the NCSC within 5 days of receipt, a preaddressed, prepaid, business reply label is included with each shipment. Diskettes and cartridges are nonreturnable.

Address Change Service

Telecommunication Options

Any mailer who wants to receive their ACS fulfillment files through a telecommunication option rather than physical magnetic media, and who meets the volume requirements (if applicable) outlined in the following sections may choose one of two telecommunication options. Please note that users incur all costs for telephone line usage along with any hardware or software configuration costs at their facilities.

1. Scheduled Mainframe Transmissions - Due to the complexities involved with implementing this option and the limitations of available technical resources, ACS customers must meet the following requirements before activation as a telecommunications customer:

a. The customer must have been active in ACS for at least two mailing cycles and must have received at least two ACS fulfillment files via tape, cartridge, or diskette.

b. ACS notifications provided to the customer for two cycles must average at least 1,000 records per week, regardless of cycle length. For example, if the ACS fulfillment file delivery is monthly, then the record count on each file is divided by four (number of weeks in a month) to determine qualification.

This option is supported by the IBM Netview File Transfer Program version 2, release 2, number 5685-108. This method allows IBM host systems to receive the file. The data modem used at the NCSC is a 9600-baud synchronous Racal-Milgo, model 9632. This option requires participants to regularly receive scheduled transmissions from the NCSC computer system to receive their files.

2. Electronic Bulletin Board System (NCSC BBS) - This method allows many systems with ANSI-compatible communications software (IBM-compatibles, Macintosh, UNIX, etc) to receive their files. This option requires that participants regularly dial into the bulletin board system to receive their files.

Customers who choose this method will receive a diskette from the NCSC which is in the same format and contains the same information as the file that is placed on the bulletin board. Once the customer is satisfied with the process of receiving their files from the bulletin board, they may request that the diskette no longer be sent. Customers may

Address Change Service

begin receiving fulfillment file transmissions immediately upon activation of their participant code.

CFS ZIP Coverage File

The CFS ZIP Coverage File is available to ACS participants at no additional charge. This file can be queried by your software to determine whether UAA mail for a particular five-digit ZIP Code is processed by a CFS site. Each data record contains a five-digit ZIP Code, its associated city and state, and a status flag that indicates the type of UAA processing in that zone. The status flag can have one of the following values:

F (Full)	All UAA mail from this ZIP Code is fully processed by a CFS site.
P (Partial)	Some UAA mail from this ZIP Code is processed by a CFS site.
M (Manual)	No UAA mail from this ZIP Code is processed by CFS sites. The mail is forwarded manually at the originating station.
I (International Military)	No UAA mail from this ZIP Code is processed by CFS sites. This is a military APO/FPO ZIP.

These files are also available on the U.S. Postal Service's Rapid Information Bulletin Board System (RIBBS). For additional information on RIBBS, call the National Customer Support Center at 800-238-3150.

Billing

The San Mateo Accounting Service Center sends each ACS participant an invoice for each fulfillment file shipment. Payments must be submitted with a copy of the invoice within 30 days of the invoice date. Invoices carrying outstanding balances more than 30 days old are charged an annual interest rate of 10 percent.

Fees

Participants are charged the automated address correction service fee for ACS fulfillment records (currently, \$0.20 per notification issued) as listed in module R of the *Domestic Mail Manual* (DMM). Participants are charged the manual address correction service fee for any manual notifications provided (currently, \$0.50 per notification issued). Please refer to DMM module F for other related fees. Also, mailers who receive their ACS fulfillment files on diskette are charged \$1.00 per diskette for this nonreturnable medium.

Address Change Service

Participation Requirements

Participant Code

To use ACS, you must add to your mailpiece address block the ACS participant code assigned by the USPS. This code can be provided only by the ACS Department at the NCSC. The participant code consists of seven alpha characters and must be printed on the first line of the address block (the optional endorsement line), aligned left, preceded by a single pound sign (#) delimiter, and followed by at least one space before any further information (carrier route, presort, etc.) is printed on that line.

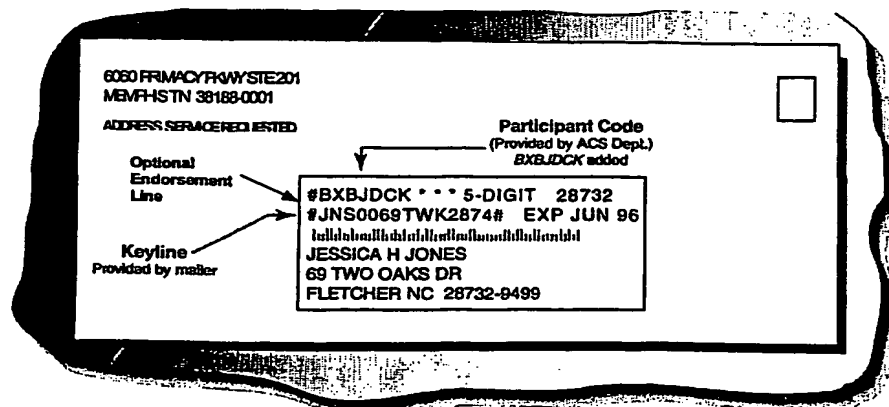
Notes:

- The pound sign (#) delimiter must precede the ACS participant code. The pound sign should not be used on any non-ACS mailings.
- The participant code must be placed on each mailpiece for which an electronic notification is requested.
- The participant code for a specified class of mail must be placed on the correct class of mail.
- Incorrect placement of the participant code decreases electronic ACS volumes.

Barcodes

ACS mailers might want to place their ZIP+4 barcodes or delivery point barcodes in the address block. All ACS mailpieces must meet all requirements for barcodes set forth in DMM module C. If you use barcodes, three locations are acceptable:

- a. Above the top line of the name and address information but below the ACS keyline (the preferred location).
- b. Below the City-State-ZIP Code line.
- c. Above the ACS participant code/optional endorsement line.



Address Change Service**Endorsement**

The endorsement must be an approved endorsement for use in the various classes of ACS. Please see DMM module M, Mail Preparation and Sortation, for regulations on the placement of endorsements.

Window Envelopes

Ensure that slippage of contents within the window envelope does not obscure the ACS participant code and keyline information. The participant code and keyline should always be visible within the window, regardless of slippage.

As part of the approval process, the submitted mailpiece sample will be tapped on all sides including the top to test for slippage. The readability of the participant code and keyline is critical to provide the customer an acceptable level of service. Note that this does differ from normal USPS automation testing procedures but is solely for the benefit of our ACS participants.

Or Current Resident

This exceptional address format (also, "Or Current (Participant)") is not valid on an ACS-modified mailpiece.

Characters

Use a font whose alpha characters are easily distinguishable from its numeric characters. For example, in some fonts "O," "S," and "B" are frequently mistaken for "0," "5," and "8."



Warning:
Any deviation from the ACS specifications when modifying mailpieces may generate increased numbers of manual notifications (hardcopies).

Text Size

The minimum acceptable point size for text is 8 points. However, for optimal results, we recommend you use at least 10-point text.

Address Change Service**Keyline**

The pound sign (#) delimiter must precede the ACS participant code. The pound sign should not be used on any non-ACS mailings.

You must place the participant code on each mailpiece for which an electronic notification is requested.

Place the participant code for a specific class of mail on the correct class of mail.

Incorrect placement of the participant code decreases electronic ACS volumes.

Most ACS participants choose to use the keyline option, which provides an effective means of matching ACS notifications with the appropriate records in their address files. Although optional for COA information, keylines are required if the mailer wants to receive electronic ACS nixie notifications. The keyline can consist of 4 to 16 characters, including a check digit that is calculated according to the USPS standard for check digit computation (see page 12, USPS Standard for Check Digit Computation).

The keyline is printed on the second line of the address block and aligned left with beginning and ending pound sign (#) delimiters. It may contain spaces to enhance readability. The pound sign delimiters and embedded spaces are not counted toward the 16-character limit and are not returned as part of an ACS record. Any other information printed on the second line of the address block must follow the ending pound sign delimiter and is ignored by ACS processing.

Although the content of individual keylines must be unique to ensure identification of a particular customer within a mailer's address file, all keylines for a given ACS participant code must be consistent in terms of keyline characteristics: length (4 to 16 characters) and attribute (numeric, alpha, or alphanumeric).

Numeric keylines are allowed to contain only digits "0" through "9."

Alpha keylines may contain the letters "A" through "Z," the forward slash "/", and the check digit (the only allowable numeric character).

Alphanumeric keylines must contain at least one numeric and one alpha character in addition to the numeric check digit. All keylines must end with the required USPS check digit.

Note: Before making any modifications to your keyline characteristics (length or attribute), you must notify the ACS Department at the NCSC. Failure to do so could result in the total elimination of any ACS electronic corrections, and all address corrections might be provided manually.

Address Change Service

Note: The value of letter "N" in an odd position, when weighted, becomes $14 \times 2 = 28$. The digits 2 and 8 are added, yielding 10. This sum is then further rendered as $1 + 0$, not the sum of 10.

USPS Standard for Check Digit Computation

ACS participants using the keyline option must use the following algorithm to compute the check digit:

- Consider the keyline as an ASCII string of 3 to 15 characters. Remove any spaces before beginning calculation.
- Convert the remaining characters to pure numeric values by zeroing out all but the lower four bits. This yields the following values for each alpha character (numeric characters retain their value):

A=1	E=5	I=9	M=13	Q=1	U=5	Y=9
B=2	F=6	J=10	N=14	R=2	V=6	Z=10
C=3	G=7	K=11	O=15	S=3	W=7	
D=4	H=8	L=12	P=0	T=4	X=8	/=15

- Multiply the value at each odd-numbered position (first position, third position, fifth position, etc.) by a weighting factor of 2.

- Add the digits (not the actual value) in all positions. For example, if the second position of the keyline is "L," whose value is 12, add the digits $1 + 2$ (not the value 12) to the sum.

Note: The value of letter "N" in an odd position, when weighted, becomes $14 \times 2 = 28$. The digits 2 and 8 are added, yielding 10. This sum is then further rendered as $1 + 0$, not the sum of 10.

- Subtract the right-most digit of the sum from 10, yielding the check digit.

Note: If the right-most digit of the sum is 0, the check digit will be 0.

Example 1: Computation of Check Digit for Keyline JLSTMS6796

Character	J	L	S	T	M	S	6	7	9	6
Position	1(O)	2(E)	3(O)	4(E)	5(O)	6(E)	7(O)	8(E)	9(O)	10(E)
Value	10	12	3	4	13	3	6	7	9	6
Weighted Value	20	12	6	4	26	3	12	7	18	6
Sum	2+0	+1+2	+6	+4	+2+6	+3	+1+2	+7	+1+8	+6=51

Right-most Digit of Sum: 1

Check Digit: $10 - 1 = 9$

Complete Keyline: JLSTMS67969

Address Change Service

Example 2: Computation of Check Digit for Keyline TMS1112/62

Character	T	M	S	1	1	1	2	/	6	2
Position	1(O)	2(E)	3(O)	4(E)	5(O)	6(E)	7(O)	8(E)	9(O)	10(E)
Value	4	13	3	1	1	1	2	15	6	2
Weighted Value	8	13	6	1	2	1	4	15	12	2
Sum	8	+1+3	+6	+1	+2	+1	+4	+1+5	+1+2	+2 = 37

Right-most Digit of Sum: 7

Check Digit: $10-7=3$

Complete Keyline: TMS1112/623

Example 3: Computation of Check Digit for Keyline 218XN91LMS

Character	2	1	8	X	N	9	1	L	M	S
Position	1(O)	2(E)	3(O)	4(E)	5(O)	6(E)	7(O)	8(E)	9(O)	10(E)
Value	2	1	8	8	14	9	1	12	13	3
Weighted Value	4	1	16	8	28	9	2	12	26	3
Sum	4	+1	+1+6	+8	+1+0	+9	+2	+1+2	+2+6	+3 = 46

Right-most Digit of Sum: 6

Check Digit: $10-6=4$

Complete Keyline: 218XN91LMS4

The following are additional examples of valid keylines that you may use for testing your algorithm. In each case, the check digit is the last character.

Address Change Service

ABC999NN/32

OTUBIKALAM8

ANIT0281

SEIRAMT4

0012////8

14024981490

811NIS0001119

AEIOUW0

12345678907

DCS14020

09876543213

Note: Although optional for COA information, keylines are required if the mailer wants to receive electronic ACS nixie notifications. Also, each keyline must end with a check digit correctly calculated using the USPS standard for check digit computation.

Address Change Service

ACS Notification Options: Mailpiece Endorsements

Depending on the mail class, ACS-modified mailpieces must carry one of the endorsements listed below to participate in ACS. The endorsement printed on First-Class Mail, Standard Mail (A), and Standard Mail (B) ACS-modified mailpieces, in conjunction with the age of the postal customer's COA order, determines the disposition of the mailpiece and the type of COA notification provided (electronic or hardcopy). See Table 2 below.

Table 2, ACS Mailpiece Endorsements Effective July 1, 1997

<i>Class</i>	<i>Endorsement</i>
First	Address Service Requested
First	Change Service Requested
Periodicals (Second)	No Endorsement required ("Address Service Requested" is optional but should be used if return of undeliverables is desired.)
Standard A (Third)	Address Service Requested
Standard A (Third)	Change Service Requested
Standard B (Fourth)	Address Service Requested
Standard B (Fourth)	Change Service Requested

Note: For more information please see DMM module F, Forwarding and Related Services, and module M, Mail Preparation and Sortation.

First-Class Mail Endorsement

Address Service Requested

Forwardable Mailpieces: During months 1 through 12 of the customer's move, the mailpiece is forwarded, and an electronic ACS COA notification is generated. If the COA order is **more than 12** months old, the mailpiece is returned with manual address correction information attached, and no ACS notification is generated.

Undeliverable Mailpieces Matched to Carrier-Filed Actions: The mailpiece is returned with manual nondelivery information attached. No ACS notification is generated.

Nixies: Mailpiece is returned with manual nondelivery information attached. No ACS notification is generated.

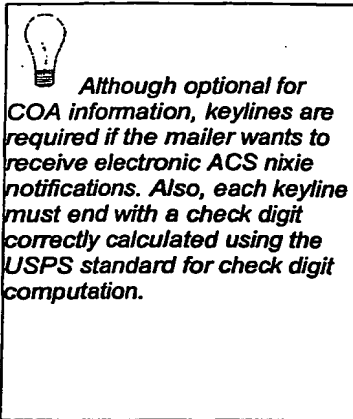
Change Service Requested

Forwardable Mailpieces: During the entire 18-month life of the COA order, the mailpiece is discarded, and an electronic ACS notification is generated.

Address Change Service

Undeliverable Mailpieces Matched to Carrier-Filed Actions: The mailpiece is discarded, and an electronic ACS COA notification with Deliverability Code "K," "G," or "C" is generated (see page 22, Deliverability Code).

Nixies: If the mailpiece is sent to CFS for processing, it is discarded, and an electronic ACS nixie notification stating the reason for nondelivery may be generated; otherwise, a manual nixie notification is created.



Periodicals Notification Options

Periodicals regulations require that mailpieces matched to COA orders be forwarded for 60 days from the move-effective date. The following ACS options govern the frequency and types of COA notifications provided. The appropriate fee will be charged for all notifications provided.

Nixies for All Periodicals Notification Options Below

If the mailpiece is sent to CFS for processing, it is discarded, and an electronic ACS nixie notification stating the reason for nondelivery may be generated; otherwise, a manual nixie notification is provided.

Note: If the optional "Address Service Requested" endorsement is used, the mailpiece itself is returned with reason for nondelivery attached, and the sender guarantees to pay return postage. No ACS notification is generated.

Option 1: Forwardable Mailpieces and Undeliverable Mailpieces Matched to Carrier-Filed Actions

An immediate ACS notification is provided on the mailpiece's first appearance during the 60-day forwarding period. A mailpiece sent to the old address after expiration of the 60-day forwarding period results in hardcopy notification.

Option 2: Forwardable Mailpieces and Undeliverable Mailpieces Matched to Carrier-Filed Actions

No address correction information is provided during the 60-day forwarding period. The first appearance of a mailpiece being sent to the old address after the 60-day forwarding period generates an ACS notification. There are no hardcopy or electronic follow-ups.

Option 3: Forwardable Mailpieces and Undeliverable Mailpieces Matched to Carrier-Filed Actions

An immediate ACS notification is provided on the mailpiece's first appearance during the 60-day forwarding period. A mailpiece sent to the old address 60 or more days after expiration of the forwarding

Address Change Service

period (120 days after the customer's move-effective date) results in a hardcopy notification being provided for follow-up.

Option 4: Forwardable Mailpieces and Undeliverable Mailpieces Matched to Carrier-Filed Actions

An immediate ACS notification is provided on the mailpiece's first appearance. There are no hardcopy or electronic follow-ups.

Option 5: Forwardable Mailpieces and Undeliverable Mailpieces Matched to Carrier-Filed Actions

An immediate ACS notification is provided on the mailpiece's first appearance during the 60-day forwarding period. A mailpiece sent to the old address after expiration of the 60-day forwarding period causes an electronic ACS follow-up notification to be generated.

Option 6: Forwardable Mailpieces and Undeliverable Mailpieces Matched to Carrier-Filed Actions

Immediate ACS notification is provided on the mailpiece's first appearance during the 60-day forwarding period. A mailpiece sent to the old address 60 or more days after expiration of the forwarding period (120 days after the customer's move-effective date) causes an electronic ACS follow-up notification to be generated.

Standard Mail (A) Endorsement

Address Service Requested

Forwardable Mailpieces: During months 1 through 12 of the customer's move, the mailpiece is forwarded, and an electronic ACS COA notification is generated. If the COA order is more than 12 months old, the mailpiece is returned at a weighted fee with manual address correction information attached. No ACS notification is generated.

Undeliverable Mailpieces Matched to Carrier-Filed Actions: During months 1 through 12 of the Carrier-Filed Action, the mailpiece is returned with manual nondelivery information attached. If the Carrier-Filed Action is more than 12 months old, the mailpiece is returned at a weighted fee with manual nondelivery information attached. In both cases, no ACS notification is generated.

Nixies: Mailpiece is returned at a weighted fee with manual nondelivery information attached. No ACS Notification is generated.

Note: Refer to DMM (Module F) for Weighted Fees.

Change Service Requested

Address Change Service

Forwardable Mailpieces: During the entire 18-month life of the COA order, the mailpiece is discarded, and an electronic ACS notification is generated.

Undeliverable Mailpieces Matched to Carrier-Filed Actions: The mailpiece is discarded, and an electronic ACS COA notification with Deliverability Code "K," "G," or "C," is generated (see page 22, Deliverability Code).

Nixies: The mailpiece is sent to CFS for processing, it is discarded, and an electronic ACS nixie notification containing the reason for nondelivery may be generated; otherwise, a manual nixie notification is created.

Standard Mail (B) Endorsement***Address Service Requested***

Forwardable Mailpieces: During months 1 through 12 of the customer's move, the mailpiece is forwarded, and an electronic ACS COA notification is generated. If the COA order is more than 12 months old, the mailpiece is returned at the appropriate single-piece rate with manual address correction information attached. No ACS notification is generated.

Undeliverable Mailpieces Matched to Carrier-Filed Actions: During months 1 through 12 of the Carrier-Filed Action, the mailpiece is returned with manual nondelivery information attached. If the Carrier-Filed Action is more than 12 months old, the mailpiece is returned at the appropriate single-piece rate with manual nondelivery information attached. In both cases, no ACS notification is generated.

Nixies: Mailpiece is returned at the appropriate single-piece rate with manual nondelivery information attached. No ACS Notification is generated.

Note: Refer to DMM (Module F) for Return Postage Fees.

Change Service Requested

Forwardable Mailpieces: During the entire 18-month life of the COA order, the mailpiece is discarded, and an electronic ACS notification is generated.

Undeliverable Mailpieces Matched to Carrier-Filed Actions: The mailpiece is discarded, and an electronic ACS COA notification with Deliverability Code "K," "G," or "C" is generated (see page 23, Deliverability Code).

Address Change Service

Nixies: The mailpiece is sent to CFS for processing, it is discarded, and an electronic ACS nixie notification containing the reason for nondelivery may be generated; otherwise, a manual nixie notification is created.

Address Change Service**Shipper-Paid Forwarding (SPF) Option For Standard Mail**

The Shipper-Paid Forwarding (SPF) option is an ACS fulfillment vehicle that allows Standard Mail (A) and Standard Mail (B) mailers to pay nonlocal forwarding charges instead of requesting payment from the recipient. The ACS COA record shows the SPF charges for that individual mailpiece. Each invoice generated for an ACS fulfillment shows accumulated SPF charges for all mailpieces represented in that fulfillment file.

To use the SPF option, you must use the keyline and an ACS participant code. The SPF option also requires that the first three characters of the keyline represent the weight of the package with the implied decimal, and the fourth character represents the rate at which the package was mailed.

Note: Mailers who participate in ACS SPF must use the endorsement **Address Service Requested**. If the mailer is also participating in BPRS, the required endorsement is **Address Service Requested - BPRS**.

Standard A:

Weight of the
package with
implied
decimal
equals 01.2 oz
Weight<16oz

#BYSBBCF
#012Y123456997#
JOHN L SMITH
123 S MAIN ST
MEMPHIS TN 38103-3600

Standard Mail
(A) rate

Note: For Standard A SPF, the fourth character must be a "Y."

Standard B:

Weight of the
package with
implied
decimal
(12.5 pounds)

#BZSBBBZ
#125L449DS14929#
JOHN L SMITH
123 S MAIN ST
MEMPHIS TN 38103-3600

Standard Mail
(B) rate

- P Bound Printed Matter single-piece
- B Basic bulk Bound Printed Matter
- R Carrier route bulk Bound Printed Matter
- A Intra-BMC Parcel Post
- D Destination BMC Parcel Post
- M Inter-BMC Parcel Post machinable
- S Special Standard Mail

Address Change Service

L Library Mail

ACS Fulfillment File**Fulfillment Record**

ACS fulfillment files contain a header record followed by records reflecting three types of notification:

- a. Notifications generated from forwardable COA orders. These notifications generate records that contain a space in the Deliverability Code field and provide the mailer with a postal customer's name, old address, and new address as reflected on PS Form 3575, *Change of Address Order*. If a temporary move has been filed a "W" will be in the deliverability code field and no new address information will be provided (see page 23, Deliverability Code).
- b. Notifications generated from non-forwardable carrier-filed actions, such as "Moved Left No Address" or "PO Box Closed" (note that this is not the case for ACS First-Class Mail). These notifications generate records that contain a "K," "G," or "C" in the Deliverability Code field.
- c. Nixie notifications. These notifications generate records that contain one of 14 traditional nixie codes in the Deliverability Code field, which identify the reason for nondelivery. ACS Nixie notifications are only available when using "Change Service Requested" as the endorsement with the exception of 2nd class where no endorsement is required.

In notification types A and B listed above, the customer name and old address information, which is supplied by the postal customer or carrier, may not exactly match the corresponding information in the mailer's address file. Because these differences may require complex matching logic to locate a customer within the address file, the ACS keyline can be used to ensure a match. The keyline is generated by the mailer and is composed of information that may be used to identify a specific customer, such as an account number, subscription number, record number, parts of the name, etc.

The keyline printed on an ACS-modified mailpiece is returned as part of an ACS fulfillment record and can therefore be used to find the relocating customer on the mailer's address list.

If an ACS participant has more than one participant code, the notifications are grouped in the fulfillment file by participant code. To interpret an ACS fulfillment record, the Deliverability Code field (position 40) should be read first to determine the notification type.

ACS Fulfillment File Header Record Format

Field No.	Position	Length	Type
Hdr-Indication	1	1	A
Hdr-Customer-ID	2 - 7	6	N
Hdr-Date	8 - 15	8	N
Hdr-Total-Cnt	16 - 24	9	N
Hdr-COA-Cnt	25 - 33	9	N
Hdr-Nixie-Cnt	34 - 42	9	N
Hdr-Ship-No	43 - 50	8	N

Address Change Service

Hdr-Class	51	1	N
Hdr-Media-Type	52	1	A
Filler	53 - 427	375	Spaces
Total Record Length: 427 Characters			

ACS Fulfillment File Header Record Fields**Hdr-Indication**

Identifies this record as the header record. Value is "H." The field length is one alpha character.

Hdr-Customer-ID

Contains a string of characters unique to each ACS customer. The field length is six numeric characters.

Hdr-Date

Indicates the file creation date in CCYYMMDD format. The field is eight numeric characters.

Hdr-Total-Cnt

Indicates the total number of COA and nixie records provided in the file. The field length is nine numeric characters.

Hdr-COA-Cnt

Indicates the total number of COAs in the file. The field length is nine numeric characters.

Hdr-Nixie-Cnt

Indicates the total number of nixies in the file. The field length is nine numeric characters.

Hdr-Ship-No

Contains the unique number for this fulfillment file. This number corresponds to the shipment number on your invoice. The field length is eight numeric characters.

Hdr-Class

Indicates the mail class of the participant code. The field length is one numeric character:

- 1 = First Class Mail
- 2 = Periodicals
- 3 = Standard Mail (A)
- 4 = Standard Mail (B)

Hdr-Media-Type

Indicates the medium that is sent. The field length is one alpha character.

Filler

This field is a filler, padded with spaces.

Address Change Service**ACS Fulfillment File Nixie Record Format**

Field ID	Position	Length	Type
Record Type ID	1	1	N
Sequence Number	2 - 9	8	N
Participant Code	10 - 16	7	A
Keyline	17 - 32	16	A/N
Filler	33 - 39	7	Spaces
Deliverability Code	40	1	A
USPS Site ID	41 - 43	3	N
Filler	44 - 209	166	X
Old Zip Code	210 - 214	5	A/N
Filler	215 - 427	213	Spaces
Total Record Length 427 Characters			

ACS Fulfillment File COA Record Format

Field ID	Position	Length	Type
Record Type ID	1	1	N
Sequence Number	2 - 9	8	N
Participant Code	10 - 16	7	A
Keyline	17 - 32	16	A/N
Move Effective Date	33 - 38	6	N
Move Type	39	1	A/N
Deliverability Code	40	1	A
USPS Site ID	41 - 43	3	N
COA Name	44 - 90	47	A/N
Old Address Type	91	1	A
Old Urbanization Name	92 - 119	28	A/N
Parsed Old Address	120 - 179	60	A/N
Old City-State-Zip	180 - 214	35	A/N
New Address Type	215	1	A
New Urbanization Name	216 - 243	28	A/N
Parsed New Address	244 - 303	60	A/N
New City-State-Zip	304 - 346	43	A/N
Label format New Address	347 - 412	66	A/N
Filler	413 - 414	2	Spaces
Postage Due	415 - 418	4	N
Filler	419 - 426	8	Spaces
Class/Notification Type	427	1	A
Total Record Length = 427 Characters			

Note: ACS Fulfillments provided via diskette also contain carriage return and line feed at the end of each record making the total record length 429 characters.

Address Change Service

ACS Fulfillment Record Fields***Record Type ID***

Indicates the origin of the ACS notification. CFS-generated COA or nixie records will contain the number "2." The field length is one numeric character.

Sequence Number

Indicates the record sequence number within each participant code group. It is reset to 00000001 at the beginning of each group. The field length is eight numeric characters, right-aligned, padded with zeros.

Participant Code

Contains the USPS-assigned participant code. The field length is seven alpha characters.

Keyline

Contains the keyline presented on the ACS-modified mailpiece (with embedded spaces removed) if the ACS keyline option is selected for this participant code. If the keyline option is not chosen, this field is filled with spaces. The field length is 16 alphanumeric characters, left-aligned, and padded with spaces.

Move Effective Date

Indicates the month and year that the customer's move became effective, as stated on Form 3575. Format is CCYYMM. For example, April 1996 would be presented as 199604. The field length is six numeric characters.

Move Type

Indicates the type of move on the customer's Form 3575. The field length is one alpha character. Possible values:

- F Family move
- I Individual move
- B Business move

Deliverability Code

Indicates the deliverability status of the mailpiece that generated this notification. Possible values include:

- a. A "space" in this position indicates that the mailpiece was matched with a COA order and new address information is being provided as part of this ACS record.

Address Change Service

b. A "K," "G," or "C" in this position indicates that the mailpiece was matched with a COA order but new address information is unknown. The values are denoted as follows:

K Customer has moved and left no forwarding address.

G Customer's post office box has been closed, and no forwarding address was filed.

C Carrier filed an action indicating that delivery to this person at this address cannot be accomplished.

c. A "W" in this position indicates that the mailpiece was matched with a COA order for a temporary change of address. The new address information is not provided as part of this ACS record. "Temporarily Away" is provided in the Parsed New Address field.

Any other character in this position identifies the mailpiece as a nixie. The field length is one alpha character. Possible values:

A	Attempted, not known	N	No such number
B	Returned for better address	Q	Not deliverable as addressed
D	Outside delivery limits	R	Refused
E	In dispute	S	No such street
I	Insufficient address	U	Unclaimed
L	Illegible	V	Vacant
M	No mail receptacle	X	No such office

Note: Unlike ACS, COA notification records, which include all applicable customer information previously noted, nixie notifications do not contain customer name, old address, or new address information.

USPS Site ID

Identifies CFS site that generated the ACS notification. The field length is three numeric characters.

Address Change Service**COA Name**

Identifies the moving customer's name as provided on the COA.

Note: This name may not exactly match the customer's name as it appears on your mailing list.

If the Move Type is "F" (Family) or "I" (Individual), the COA Name field is parsed (i.e., subdivided) into the following components:

Field Subfield	Position	Length
Surname	44-63	20
First name, middle initial, etc.	64-78	15
Prefix	79-84	6
Suffix	85-90	6

A percent symbol (%) in the Surname subfield is interpreted as "in care of." For example, if positions 42 - 88 contained

"JONES % SMITH BARBARA"

it would be read as

"BARBARA JONES in care of SMITH"

at the new address.

If the move type is "B" (Business), then the entire COA Name field is not parsed but is treated as a single 47-character Business Name field.

The field length is 47 alphanumeric characters, left-aligned, and padded with spaces.

Old Address Type

Identifies the type of address from which the customer is moving. The field length is one alpha character. Valid types of old addresses include:

- G General delivery
- H Highway contract
- P Post office box
- R Rural route
- S Street address
- V Highway contract with box number
- X Rural route with box number

Old Urbanization Name

Identifies an area, sector, or development within a Puerto Rico urbanization area from which the customer is moving. The field length is 28 alphanumeric characters.

Address Change Service***Parsed Old Address***

Identifies the delivery address from which the customer is moving. It is parsed into the following component subfields:

Parsed Subfield	Position	Length
Primary Number	120 - 129	10
Pre-Directional	130 - 131	2
Street Name	132 - 159	28
Street Suffix	160 - 163	4
Post-Directional	164 - 165	2
Unit Designator	166 - 169	4
Secondary Number	170 - 179	10

If the Old Address Type is "P" (PO box), "R" (rural route), or "H" (highway contract route), the Primary Number subfield contains the relevant PO box, rural route, or highway contract route number. The Street Name subfield contains "PO BOX," "RR," or "HC," respectively.

If the Old Address Type is "X" (rural route with box number) or "V" (highway contract route with box number), the Primary Number subfield contains the relevant rural route or highway contract number, and the Secondary Number subfield contains the associated box number. The Street Name subfield contains "RR" or "HC," respectively.

All subfields outlined within the Old Address Type are left-aligned and padded with spaces. If any components are not present in an address (e.g., no pre-directional required), then those positions are filled with spaces. The field length is 60 alphanumeric characters.

Old City-State-ZIP

Identifies the city, state, and ZIP Code associated with the old address. The total field length is 35 alphanumeric characters. It is parsed into the following component subfields:

Parsed Subfield	Position	Length
City	180 - 207	28
State	208 - 209	2
5-Digit ZIP Code	210 - 214	5

New Address Type

Address Change Service

Identifies the type of address to which the customer is moving. The field length is one alpha character. Possible values include:

- F Foreign
- G General delivery
- H Highway contract route
- P Post office box
- R Rural route
- S Street address
- V Highway contract route with box number
- X Rural route with box number

New Urbanization Name

Identifies the area, sector, or development within a Puerto Rico urbanization area to which the customer is moving. The field length is 28 alphanumeric characters.

Parsed New Address

Identifies the delivery address to which the customer is moving. It is parsed into the following component subfields:

<i>Parsed Subfield</i>	<i>Position</i>	<i>Length</i>
Primary Number	244 - 253	10
Pre-Directional	254 - 255	2
Street Name	256 - 283	28
Street Suffix	284 - 287	4
Post-Directional	288 - 289	2
Unit Designator	290 - 293	4
Secondary Number	294 - 303	10

If the New Address Type is "P" (PO box), "R" (rural route), or "H" (highway contract route), the Primary Number subfield contains the relevant PO box, rural route number, or highway contract route number. The Street Name subfield contains "P," "RR," or "HC," respectively.

If the New Address Type is "X" (rural route with box number) or "V" (highway contract route with box number), the Primary Number subfield contains the relevant rural route or highway contract number, and the Secondary Number subfield contains the associated box number. The Street Name subfield contains "RR" or "HC," respectively.

If the New Address Type is "F" (foreign), the address is not parsed but is treated as a single 60-character field.

All subfields within the new address are left-aligned and padded with spaces. If any component is absent from a particular address, then its subfield is filled with spaces. The field length is 60 alphanumeric characters.

Address Change Service***New City-State-ZIP***

Identifies the city, state, and ZIP Code associated with the new address. It is parsed into its component subfields as follows:

Field Name	Position	Length
City	304 - 331	28
State	332 - 333	2
5-Digit ZIP Code	334 - 338	5
Hyphen	339	1
Zip+4 Add-On Code	340 - 343	4
DPBC Information	344 - 346	3

If the New Address Type is "F" (foreign), the New City-State-ZIP field is not parsed but is treated as a single 43-character alphanumeric field.

Label Format New Address

Identifies the new address components connected into a label format with extra spaces removed. It may be output in this format directly to a mailing label. The field length is 66 alphanumeric characters, left-aligned, and padded with spaces.

Filler

The field length is two spaces.

Postage Due

Identifies the forwarding postage charge for the individual mailpiece. Applies only to the Standard Mail Shipper-Paid Forwarding option. The field length is four numeric characters.

Filler

The field length is eight spaces.

Class/Notification Type

Identifies the mail class carried by the mailpiece that generated this ACS notification. The field length is one alpha character. Possible values:

Value	Mail Class
A	(Reserved for future use)
B	First-Class Mail
C	Periodicals, Initial Notification
D	Standard Mail (A)
E	Standard Mail (B)
F	Periodicals, Follow-Up Notification

Address Change Service

Application Procedures

Address Change Service Application

- a. **Complete all sections.** Complete a separate application for each class of mail. The application must be signed by the individual(s) at the company who is (are) responsible for billing.
- b. **Mailpiece title.** This information is used to identify the participant code(s) assigned to your ACS-participating mailpieces. Mailers of periodicals must request a separate participant code for each title. Participants in other classes may use one code for all ACS mailpieces within the same class or may request several.

Within 10 Days After We Receive Your Application

- a. You will receive a letter stating the assigned participant code(s) and optional keyline information. Review this information for accuracy. If any of this information is incorrect, notify the ACS Department immediately.
- b. If you are a new ACS participant, you may request a test file that allows your technical staff to examine correctly formatted ACS fulfillment records.

Before Activation

Warning: Failure to request activation prior to mailing will result in total elimination of any ACS electronic corrections, and all address corrections will be provided manually.

- a. Submit a sample galley of 25 to 50 mailing labels or address blocks that have been modified to reflect the proper ACS coding. We will verify that all ACS information is placed correctly. If you are using the keyline option, each sample label should have a different keyline so that we may verify your check digit calculation and placement.
- b. Submit at least one complete sample of your actual mailpiece. We will verify that your mailpiece endorsement is acceptable for ACS processing.
- c. Upon receipt of your samples, we will notify you in writing of their acceptance or advise you of any necessary corrections.
- d. After final approval, you must request activation of your participant code(s) at least seven working days before your first ACS mailing. Submit requests in writing to the ACS Department. Failure to request activation prior to mailing will result in total elimination of any ACS electronic corrections, and all address corrections will be provided manually.

Note: Authorization and approval for Address Change Service may be given only by the National Customer Support Center in Memphis, TN.

Address Change Service

—Insert Change of Address Service Application—

Address Change Service

This page intentionally left blank

Address Change Service

This page intentionally left blank

CLAIMS

We claim:

1. A method for sending an electronic file to a customer, comprising:

receiving an approval from the customer indicating acceptable content for electronic files to be sent to the customer;

receiving the electronic file from a sender, the electronic file including file content and a message content identifier corresponding to the file content;

comparing the message content identifier to the approval from the customer; and

delivering the file content to an electronic mailbox of the customer, if the message content identifier is consistent with the approval from the customer.

2. The method of claim 1, comprising:

sending an approved status report to the sender, if the file content is delivered to the customer.

3. The method of claim 1, comprising:

sending a declined status report to the sender, if the message content identifier is inconsistent with the approval from the customer, and the file content is undeliverable.

4. The method of claim 1, wherein the delivering stage comprises:
delivering the file content to a folder within the electronic mailbox of the customer, the folder corresponding to the message content identifier.

5. The method of claim 4, wherein the delivering stage comprises:
delivering the file content to a pool folder, if the message content identifier is inconsistent with the acceptable content indicated by the approval from the customer.

6. The method of claim 1, wherein the receiving stage comprises:
using a program to apply the message content identifier to the file content that is received from the sender.

7. A method for sending an electronic file to a customer, comprising:

uploading a physical address list file to a processor;
uploading file content and a content identifier code to the processor;

querying a customer database with the processor to retrieve a customer's e-address and filtering preferences; and

combining the customer's e-address and file content and content identifier code within the processor to create the electronic file for delivery to the customer.

8. The method of claim 7, further comprising sending the electronic file to a filter for identification of customer preferences.

9. The method of claim 8, further comprising:
comparing the content identifier code to the customer preferences and, if the content identifier code is consistent with the customer preferences, sending the electronic file to a routing system for delivery to an appropriate folder in a customer's electronic mailbox, and notifying a sender of the electronic message that the electronic message has been delivered.
10. The method of claim 8, further comprising:
comparing the content identifier code to the customer preferences and, if the content identifier code is inconsistent with the customer preferences, sending the electronic file to a pool folder.
11. The method of claim 8, further comprising:
comparing the content identifier code to the customer preferences, and if the content identifier code is inconsistent with the customer preferences, marking the electronic message as undeliverable, and notifying the sender of the electronic message that the electronic message is undeliverable.
12. A system for sending an electronic file to a customer, comprising:
means for receiving an approval from the customer indicating acceptable content for electronic files to be sent to the customer;
means for receiving the electronic file from a sender, the electronic file including file content and a message content identifier corresponding to the file content;
means for comparing the message content identifier to the approval from the customer; and
means for delivering the file content to an electronic mailbox of the customer, if the message content identifier is consistent with the acceptable content indicated by the approval from the customer.

13. The system of claim 12, further comprising means for sending an approved status report to the sender, if the file content is delivered to the customer.

14. The system of claim 12, further comprising means for sending a declined status report to the sender, if the message content identifier is inconsistent with the acceptable content indicated by the approval from the customer and the message content identifier.

15. The system of claim 12, wherein the means for delivering further comprises means for delivering the file content to a folder within an electronic mailbox, the folder corresponding to the message content identifier.

16. The system of claim 12, wherein the means for delivering further comprises means for delivering the file content to a pool folder, if the message content identifier is inconsistent with the acceptable content indicated by the approval from the customer.

17. The system of claim 12, wherein the means for receiving the electronic file further comprises means for using a program to apply the message content identifier to the electronic file.

18. A system for composing and delivering an electronic message to a customer, comprising:

a component for uploading a physical address mailing list file and a message content and coding file;

a processor that receives the uploaded physical mailing list file and message content and coding file, queries a database for e-address and customer preferences, and creates the electronic message;

a filter that filters the message content and coding file, based on the customers preferences; and

a message routing system that receives the message content and coding file that have been successfully filtered and delivers the electronic message to a customer electronic mailbox.

19. The system of claim 18, wherein the filter is located within the processor and filters the message content and coding file before forwarding the electronic message, which has been developed from a successfully filtered message content and coding file, to the message routing system.

20. The system of claim 19, wherein a notification is provided indicating successful delivery to the message routing system.

21. The system of claim 18, wherein the filter is located in the database and the filtering takes place as part of the query.

22. The system of claim 18, wherein an unsuccessfully filtered message content and coding file is one of delivered to a pool and undelivered.

23. The system of claim 22, wherein a notification is provided indicating one of unsuccessful delivery to the message routing system and delivery to a pool.

24. A system for sending an electronic file to a customer, comprising:

a registration system that receives an approval from the customer indicating acceptable content for electronic files to be sent to the customer;

a filtering system that receives the electronic file from a sender, the electronic file including file content and a message content identifier

corresponding to the file content, and compares the message content identifier to the approval from the customer; and

a message routing system that delivers the file content to an electronic mailbox of the customer, if the message content identifier is consistent with the acceptable content indicated by the approval from the customer.

25. A system for sending an electronic file to a customer, comprising:

an interface component that connects a sender to the system, which assigns a message content identifier to the sender;

a registration component that interfaces with the system to set up the customer's preferences and through the system sets up the customer's e-mail account on an e-mail system;

a filtering component that filters the electronic file sent by the sender, based on the message content identifier, and one of delivers the electronic file to the customer's e-mail account and rejects the electronic file as undeliverable.

26. The system of claim 25, wherein the message content identifier includes codes identifying the industry segment of a company, permutations of product types, and offerings associated with the company.

27. The system of claim 25, wherein a notification is provided indicating successful delivery to the customer's e-mail account.

28. The system of claim 25, wherein an unsuccessfully filtered electronic file is one of delivered to a pool and undelivered.

29. The system of claim 28, wherein a notification is provided indicating one of unsuccessful delivery to the customer's e-mail account and delivery to a pool.

30. A system for sending an electronic file to a customer including a processor, comprising:

- a address matching component that parses a physical address and constructs match codes for interrogating a match directory within the address matching component;

- a key generation querying function that receives results from the address matching component, based on the interrogation of the match directory, and queries a database to obtain an electronic address list file;

- a mail merge processor that receives the electronic address list file and a message, with a message content identifier, and creates an electronic mail item;

- a filtering component that filters the electronic mail item based on the message content identifier; and

- a routing component for delivering the electronic mail item that has been successfully filtered to the customer's e-mail account.

31. The system of claim 30, wherein a notification is provided indicating successful delivery to the customer's e-mail account.

32. The system of claim 30, wherein an unsuccessfully filtered message is one of delivered to a pool and undelivered.

33. The system of claim 32, wherein a notification is provided indicating one of unsuccessful delivery to the message routing system and delivery to a pool.

34. A computer-readable media containing computer-readable instructions for performing:

receiving an approval from the customer indicating acceptable content for electronic files to be sent to the customer;

receiving the electronic file from a sender, the electronic file including file content and a message content identifier corresponding to the file content;

comparing the message content identifier to the approval from the customer; and

delivering the file content to an electronic mailbox of the customer, if the message content identifier is consistent with the approval from the customer.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.